



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,137	07/18/2003	Jeffrey A. Wilmer	K0476-700710	5203

37462 7590 08/09/2005

LOWRIE, LANDO & ANASTASI  
RIVERFRONT OFFICE  
ONE MAIN STREET, ELEVENTH FLOOR  
CAMBRIDGE, MA 02142

EXAMINER

SOOHOO, TONY GLEN

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/623,137

Applicant(s)

WILMER ET AL.

Examiner

Tony G. Soohoo

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/05&amp;12/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim interpretation***

Claim 13 points out an inlet and outlet upon the blender chamber for a recirculation line without a positive recitation of the recirculation line. However claim 13 also points out a "means for analyzing the mixture in the recirculation line and adjusting the rate at which the second component is added to the blend chamber" which positively refers to a structure in cooperation with the recirculation line. Thus it is held that the claim positively encompasses a recirculation line thereby in which the means plus function may cooperate with and upon.

Claim 10 points out a negative limitation of without using a mass flow controller, see scope of discussion on page 13 of the instant specification.

#### **MPEP 2173.05(i) states: Negative Limitations**

Any negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims. See *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) ("[the] specification, having described the whole, necessarily described the part remaining."). See also *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984). The mere absence of a positive recitation is not basis for an exclusion. Any claim containing a negative limitation which does not have basis in the original disclosure should be rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Note that a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support. *Ex parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993). See MPEP § 2163 - § 2163.07(b) for a discussion of the written description requirement of 35 U.S.C. 112, first paragraph.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 6; 7-12; 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hathorn et al 3161203.

The reference to Hathorn (et al) teaches a controller feed system and mixing tank 3 having feed source lines 4 5 with a respective valve 16, 21 which is controlled by a controller 14. The controller 14 is further reactive to a sensor 13 located in a recirculation line 17 having an inlet line 6a, and an outlet line 17 feeding back into the mixing tank 3 with a pump 9 and an outlet line 6c located between the pump and the recirculation line 17 outlet to the tank.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conoby et al 5516423 in view of Hathorn et al 3161203.

Conoby, embodiment shown in figure 2, discloses a blend chamber 12 with 1<sup>st</sup> inlet and 2<sup>nd</sup> inlet for respective lines 39, 43, with connective respective metering

Art Unit: 1723

pumps 46, 40, column 5 lines 47-52 and also suggests simple on/off control schemes for reagent feed may be used. The Conoby reference also teaches a recirculation line 70, 73 with recirculation pump 72 for recirculation of fluid back into the tank chamber 12, column 7, lines 62-68 through column 8 line 1, and a pH sensor 22 in the tank which may indicate conductivity to sense the mixture to send a signal output 23 a controller 30 to activate the feed of at least comprising the 2<sup>nd</sup> material to achieve a desired pH which is an indicator of the amount of concentration of the second material in the mixture, col. 5, line 23-27, and column 5 line 51-67.

The Conoby reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of the 1<sup>st</sup> and 2<sup>nd</sup> lines having a valve in contrast to a metering pump, and the sensor 22 being located in the recirculation line to sense the mixture in contrast to the tank itself.

The reference to Hathorn (et al) teaches a controller feed system and mixing tank 3 having feed source lines 4 5 with a respective valve 16, 21 which is controlled by a controller 14. The controller 14 is further reactive to a sensor 13 located in a recirculation line 17 having an inlet line 6a, and an outlet line 17 feeding back into the mixing tank 3 with a pump 9 and an outlet line 6c located between the pump and the recirculation line 17 outlet to the tank.

In view of the showing of the state of the art by the Hathorn reference, a person having ordinary skill in the art in reviewing the showing by the Hathorn reference that one may monitor the condition of the mixture in the recirculation line, and that utilize valve controls as means to feed material flow into the mixing tank, it is deemed that it

Art Unit: 1723

would have been obvious to one of ordinary skill in the art to substitute for the metering valves of the Conoby reference with an valve as shown by Hathorn, and further modify the pH sensor location to the recirculation line as shown by Hathorn so that the metering of material and measurement of the pH which is dispensed is performed more accurately.

3. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilmer et al 6923568 in view of Hathorn et al 3161203.

4. or alternately, Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilmer et al US 2002/0048213 in view of Hathorn et al 3161203.

Wilmer et al 6923568 or alternately US 2002/0048213 of the same family, discloses a blend chamber 22 with 1<sup>st</sup> inlet and 2<sup>nd</sup> inlet for respective lines 18, 18, with connective respective valves for respective feed. The Wilmer et al 6923568 a flow characteristic sensor 96 from the mixing tank 22 which may indicate flow characteristic, figure 10, to sense the mixture to send a signal output a controller 91 to activate the feed of material by the valve 21, column 13, lines 54-63.

The Wilmer et al 6923568 or alternately US 2002/0048213 reference discloses all of the recited subject matter as defined within the scope of the claims with the exception of the sensor being located in a recirculation line connected to the mixer 22 tank itself

Art Unit: 1723

The reference to Hathorn (et al) teaches a controller feed system and mixing tank 3 having feed source lines 4 5 with a respective valve 16, 21 which is controlled by a controller 14. The controller 14 is further reactive to a sensor 13 located in a recirculation line 17 having an inlet line 6a, and an outlet line 17 feeding back into the mixing tank 3 with a pump 9 and an outlet line 6c located between the pump and the recirculation line 17 outlet to the tank.

In view of the showing of the state of the art by the Hathorn reference, a person having ordinary skill in the art in reviewing the showing by the Hathorn reference that one may monitor the condition of the mixture in a recirculation line, it is deemed that it would have been obvious to one of ordinary skill in the art to relocate the sensor and provide a recirculation line with the sensor relocated at the recirculation line of the mixing tank as shown by Hathorn so that the metering of material and measurement of the mixture characteristic is performed more accurately.

With regards to sensing and using a conductivity sensor, the Wilmer reference teaches column 14, line 55-56 (in the U.S. patent) that the sensor is a sensor to sense the blended process material is acceptable. Whereby a conductivity of a mixture is an known manner to evaluate a mixture, it is deemed that it would have been obvious to one of ordinary skill in the art to without undue experimentation to utilize a conductivity sensor in order to more accurately measure the material mixture conductivity of a respective intended use in pH sensitive mixtures.


**Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chan et al 5647391, Wilmer et al 20020048213, Allen 5114239, O'Dougherty et al 5924794, Urquhart et al 6799883, Jonsson et al 4784495, Jonsson et al 6149294, Suzuki et al 5800056, Thomsen 4474476.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G. Soohoo whose telephone number is (571) 272 1147. The examiner can normally be reached on 7-5PM, Tue-Fri (As of 9/05 Fax will be 571-273-8300).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tony G Soohoo  
Primary Examiner  
Art Unit 1723